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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,301	11/17/2003	Michael D. Skelcher	17440	5228

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EXAMINER

SPISICH, GEORGE D

ART UNIT

PAPER NUMBER

3616

DATE MAILED: 12/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/715,301

Applicant(s)

SKELCHER ET AL.

Examiner

George D. Spisich

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/17/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

This application contains claims directed to the following patentably distinct species of the claimed invention:

- I. Figure 1, drawn to a cab suspension arrangement having a piston and cylinder pumping element.
- II. Figure 2, drawn to a cab suspension arrangement having a reversible pump.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, 1-3 and 5-9 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation with Steven Bucchianeri (Reg. No. 54,928) on December 2, 2005, a provisional election was made without traverse to prosecute the invention of Figure 1, drawn to a species having a piston and cylinder pumping element, claims 1-9. Affirmation of this election must be made by applicant in replying to this Office action. No claims have been withdrawn, as claim 3 is considered to be a broad interpretation of Figure 1 and not limited to the non-elected species shown in Figure 2.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the alarm (claim 6), the electronic control circuit (claim 7), the sensor being a "games controller" mounted for movement with the cab (claims 7 and 8) and the low pass filter (claim 9) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 5-6. the phrase "two mutually inclined axes" is unclear. It is unclear what is meant by "two mutually inclined" axes.

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In claims 3 and 4, line 2, there is claimed "each pumping element". Plural pumping elements lack antecedent basis. Claim 1, lines 6-7, claimed each pair connected to a common pumping element, does not positively claim that there are 2 pumping elements (one for each pair).

Claim 8 is unclear. The term "games controller" is unclear and it is not proper to claim an element by a term that does not have a specific make-up either presently or in the future.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paggi et al. (USPN 6,273,203 provided in Applicant's IDS) in view of Moscicki (USPN 5,139,104) and further in view of Heyring (USPN 5,562,305).

Paggi et al. discloses an agricultural vehicle having a chassis and a cab connected to the chassis by means of a support system including four hydraulic actuators. The actuators are arranged in a square formation.

The system is controlled by an electronic control unit/circuit by a signal from a sensor inherently broadly considered to move with the movement of the cab in at least that the cab and the sensor are on the same vehicle.

The sensor is disclosed as a gyroscope or inclinometer (col. 2, lines 45-57) and broadly considered a "games controller".

Paggi et al. discloses an alarm (col. 3, lines 23-27) that indicates a rollover danger by one or more of the actuators reaching the end of its stroke position (limit of its adjustment range).

Although Paggi et al. does not disclose the actuator as a hydro-pneumatic unit that additionally acts as a spring and damper, Paggi et al. disclose (col. 2, lines 28-30), that the actuators can be hydraulic or pneumatic.

Paggi et al. does not disclose the actuators being diagonally connected in pairs in a closed circuit and having a pump having a piston associated with each pair, such that as one actuator is lowered and the volume of fluid in that actuator is reduced, the volume of fluid in the other actuator of the pair is correspondingly increased.

However, Moscicki discloses a cab suspension device for the leveling of a cab and having four actuators arranged in a square formation and including diagonal pairs of actuators arranged in closed circuit about a respective one of two mutually inclined axes, such that a volume of an upper (for example) chamber of one actuator that is reduced, the lower chamber of the diagonal opposite actuator is correspondingly increased such that the cab is maintained level along that inclined axis.

Heyring discloses a vehicle suspension system having four actuators arranged in a closed circuit and in diagonal pairs. The pairs are connected to a common pumping element, which is also considered a dual/separate pumping unit as they are two pistons and four working chambers and the pump is essentially a pump for each diagonal pair of actuators. As stated above, the pump(s) include a cylinder having two working chambers (each) separated by one another by a movable piston.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cab suspension arrangement of Paggi et al. such that pairs of the actuators are diagonally connected in closed circuit in mutually inclined axes as taught by Moscicki so as to provide an efficient manner of stably balancing the cab along diagonal axes, and providing each diagonal pair with a pumping element having a cylinder, a piston and working chambers as taught by Heyring so as to provide a simpler pumping arrangement.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paggi et al. in view of Moscicki in view of Heyring as applied to claims 1-4 and 6-8 above, and further in view of Karnopp et al. (USPN 5,116,077).

The previous references have been discussed in the rejection above. However, neither reference discloses the well known use of an actuator comprising a hydro-pneumatic unit that additionally acts as a spring and damper.

Karnopp et al. discloses a vehicle leveling suspension that includes an actuator comprising a hydro-pneumatic unit that additionally acts as a spring and damper. This arrangement and the use of a hydro-pneumatic unit is well known in the art of vehicle suspensions.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the actuator(s) of Paggi et al. in view of Moscicki in view of Heyring with a well known actuator comprising a hydro-pneumatic unit that acts as a spring and damper as taught by Karnopp et al. so as to provide the ability to raise a corner of the cab and further have a shock absorbing feature to make the cab more stable and comfortable for the occupant.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paggi et al. in view of Moscicki in view of Heyring as applied to claims 1-4 and 6-8 above, and further in view of Catanzarite et al. (USPN 6,070,681).

The previous references have been discussed in the rejection above. However, these references do not teach the well known concept of providing a low pass filter for filtering the output of a sensor.

Catanzarite et al. discloses a cab suspension having a controller that uses a sensor that further has a low pass filter (col. 11, line 13-16) for filtering the signal from such noise as provided in a suspension so as to provide a clean signal for the proper control of the cab suspension arrangement.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cab suspension arrangement of Paggi et al., in view of Mosciski in view of Heyring, by including a low pass filter as taught by Catanzarite et al. for filtering the noise provided by the constant vibration of vehicle operation so as to provide a clean signal for the electric controller of the cab suspension arrangement to efficiently and consistently perform the necessary adjusting of the level of the cab by the actuators.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fun (USPN 4,483,409), Hiruma (USPN 3,963,261), Tecco et al. (USPN 5,044,455), Stephens (USPN 4,506,751), Sonneborn (USPN 4,463,818), Shubert (USPN 6,029,764), Beard et al. (USPN 5,603,387), Rogala (USPN 6,394,238), Furihata et al. (USPN 5,623,410), Agner (USPN 6,039,326).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George D. Spisich whose telephone number is (571) 272-6676. The examiner can normally be reached on Monday-Friday 9:00 to 6:30 except alt. Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

George D. Spisich
December 17, 2005



 12/27/05
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